



DRAFT

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

**WAR BONNET GAME FARM
NEAR FAIRFIELD, MONTANA**

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**Montana Fish, Wildlife & Parks
Region 4
4600 Giant Springs Road
Great Falls, Montana 59406**



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SUMMARY

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT PROPOSED WAR BONNET GAME FARM EXPANSION

INTRODUCTION

Montana Fish, Wildlife and Parks (FWP) is required to perform an environmental analysis in accordance with the Montana Environmental Policy Act (MEPA) for each proposal for projects, programs, legislation, and other major actions of state government significantly affecting the quality of the human environment (Administrative Rules of Montana [ARM] 12.2.430). FWP uses environmental assessments (EAs) in the game farm licensing process to identify and evaluate environmental impacts of a proposed game farm. EAs also determine whether the impacts would be significant and whether, as a consequence, FWP would perform a more detailed environmental impact statement (EIS).

When preparing an EA, FWP reviews environmental impacts of the Proposed Action, impacts of the No Action Alternative, and impacts of other alternative actions which include recommended and/or mandatory measures to mitigate the project's impacts. A mitigated EA includes alternatives with enforceable requirements (stipulations) and/or mitigation measures which reduce impacts of the Proposed Action. The EA may also recommend a preferred alternative for the FWP decision maker.

Based upon its review of the War Bonnet Game Farm application, FWP has prepared a mitigated EA.

OBJECTIVES

This EA has been prepared to serve the following purposes in accordance with FWP MEPA rules (ARM 12.2.430):

- to ensure that FWP uses natural and social sciences in planning and decision making;
- to be used in conjunction with other agency planning and decision-making procedures to make a determination regarding the Proposed Action;
- to assist in the evaluation of reasonable alternatives and the development of conditions, stipulations, and modifications to the Proposed Action;
- to determine the need to prepare an EIS through an initial evaluation and determination of the significance of impacts associated with the Proposed Action;
- to ensure the fullest appropriate opportunity for public review and comment on the Proposed Action; and
- to examine and document the effects of the Proposed Action on the quality of the human environment.



PUBLIC PARTICIPATION

Public involvement in the Environmental Assessment (EA) process includes steps to identify and address public concerns. The Draft Supplemental EA for the War Bonnet Game Farm expansion will be available for public review and comment from July 23, 1999 until 5 pm on August 13, 1999 at the Region 4 FWP office listed below. Submit all comments regarding this EA to the same address.

Mr. Mike Aderhold, Regional Supervisor
Fish, Wildlife and Parks, Region 4
4600 Giant Springs Road
Great Falls, Montana 59406

Phone: (406) 454-5840

PROPOSED ACTION AND ALTERNATIVES

PROPOSED ACTION

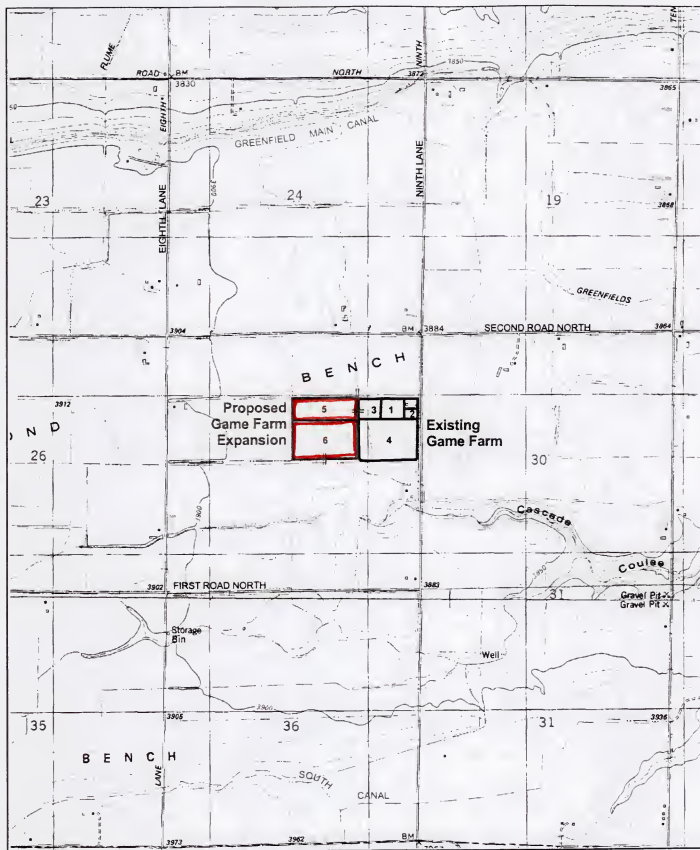
FWP received a completed application on April 19, 1999 to develop an expansion to an existing game farm. The application for the expansion names the facility the War Bonnet Game Farm; the existing game farm is licensed as the Covered Wagon Game Farm. The proposed game farm expansion is located in Teton County, approximately 8 miles east of Fairfield and 3 miles east of Greenfield, Montana. The Proposed Action consists of constructing a 40-acre enclosure east of the existing 37-acre game farm enclosure (Figure 1). Quarantine and handling facilities at the existing game farm would also be used for elk at the expansion pasture.

The site is currently used as irrigated hayland. Under the Proposed Action, hay production would continue in the presence of a year-round elk population, but the hay would be harvested directly by the elk rather than being cut and stored for winter fodder. The maximum number of elk at the game farm would be increased from 60 elk at the existing 37-acre facility to a maximum of 150 elk at the expanded facility totaling 77 acres. As a result, the maximum size herd at the completed game farm would consist of up to 50 bulls, 50 cows, and 50 calves. Boarding of elk may be used as an economic means to increase the size of the herd. The applicant would breed, sell, and dispose of domestic elk in accordance with Montana game farm and disease control requirements stipulated in Montana statute and administrative rules. The game farm would provide meat, antlers, and trophy sales, as well as elk breeding stock.

The existing game farm consists of Phases 1, 2, 3, and 4 (Figure 1). Phases 5 and 6 comprising the proposed expansion area would be completed during 1999. Fence construction for the expansion would be in accordance with FWP requirements in ARM 12.6.1531. The Phase 4 and Phase 6 pastures would be separated by a single length of fencing. A gate would be located in the south fence of Phase 6. An alley approximately 20 feet wide would separate the east fence of Phase 5 from the west fence of Phase 3. Gates would be installed in the Phase 5 and Phase 3 fencing near the south end of the alley to allow passage between these two pastures by crossing the alley. A gate would seal the north end of the alley and would be kept closed at all times when not in immediate use to access the alley.

During preparation of the EA for the existing game farm enclosure, the applicant indicated his intention to occasionally allow members of the public to harvest or shoot game farm elk in the Phase 1 pasture. All shooting in the Phase 1 pasture would be toward the west and southwest away from the direction of houses and roads to the north and east. The applicant proposes that shooting of elk by the public would also be allowed within the Phase 5 and 6 pastures comprising the 40-acre expansion. All shooting in the Phase 5 and 6 pastures would be directed toward the south and southwest away from any houses and roads to the east, north, and west.





0 Feet 2000

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Note: Topographic Base
Derived From USGS
1:24,000 Scale Maps.

- Proposed Game Farm Expansion
- Existing Game Farm
- Gate
- 2 Phase Number

Site Map
Proposed Game Farm EA
War Bonnet Game Farm
Teton County, Montana
FIGURE 1



ALTERNATIVES

One alternative (No Action Alternative) is evaluated in this EA. Under the No Action Alternative, FWP would not issue a license for the War Bonnet Game Farm as proposed. Therefore, no game farm animals would be placed on the proposed game farm expansion area. Implementation of the No Action Alternative would not preclude other activities allowed under local, state and federal laws to take place at the game farm expansion area.

PURPOSE AND NEED OF THE PROPOSED ACTION

The War Bonnet Game Farm would be a commercial enterprise that would provide meat, antlers, and trophy sales, as well as elk breeding stock for the game farm market. The owner and members of the public may occasionally harvest or shoot game farm animals at the existing Phase I pasture and in the proposed Phase 5 and 6 pastures of the proposed expansion area.

ROLE OF FWP AND DEPARTMENT OF LIVESTOCK (DoL)

FWP is the lead agency in preparing this Supplemental EA for the proposed project. This document is written in accordance with the Montana Environmental Quality Council (EQC) MEPA Handbook and FWP statutory requirements for preparing an EA under Title 75, Chapter 1, Part 2 Montana Code Annotated (MCA) and FWP rules under ARM 12.2.428 et seq. This EA for the War Bonnet Game Farm supplements the previous EA prepared by FWP in 1998 for the adjacent Covered Wagon Game Farm.

FWP shares regulatory responsibilities for new and expanding game farms with the DoL. The DoL is responsible for regulating the health, transportation and identification of game farm animals. During the application process, all quarantine area plans and specifications are submitted to the DoL for approval.

AFFECTED ENVIRONMENT

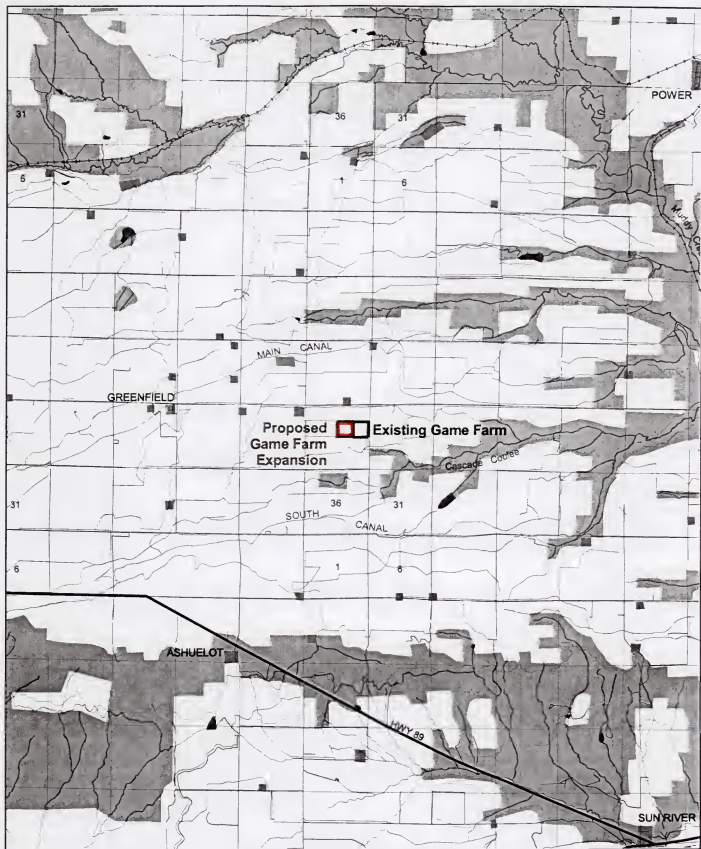
The proposed 40-acre War Bonnet Game Farm expansion is located on the Second Bench of the Greenfield Irrigation District, approximately 8 miles east of Fairfield and 3 miles east of Greenfield, Montana. The predominant land use on the bench is irrigated farming of small grains and forage crops, and grazing of cattle and sheep (Figure 2). The site is currently used as irrigated hayland. Under the Proposed Action, hay production would continue in the presence of a year-round elk population of up to 150 animals. The farm house and support buildings are located immediately adjacent to the existing game farm (Figure 1) and the site is surrounded by private land (Figure 3). There are approximately 10 residences within a 1-mile radius of the site and the nearest neighbor is located approximately 1,200 feet to the southeast. Public roads are located ¼-mile north and east of the proposed expansion area and ½-mile to the west and south. This section summarizes the primary environmental resources in the project area.

LAND RESOURCES

The Second Bench is a remnant of a broad alluvial plain sloping east from the Rocky Mountains. The bench is bounded by Spring Coulee on the north and Cascade Coulee on the south. The proposed game farm site is nearly level and lies at an elevation of approximately 3900 feet. The north, west, and south sides of the site are bounded by bermed drainage ditches. The outer perimeter fencing of the proposed game farm would be set in approximately 20 feet from the drainage ditches.

Soil at the site consists of deep, well drained, clay loam formed in alluvium. Clay content ranges from 18 to 35% and the soil reaction is slightly to moderately alkaline. There is a risk of corrosion to uncoated steel due to the soil alkalinity. Erosion hazards are slight or moderate from wind and slight from water.





0 Miles 1.5

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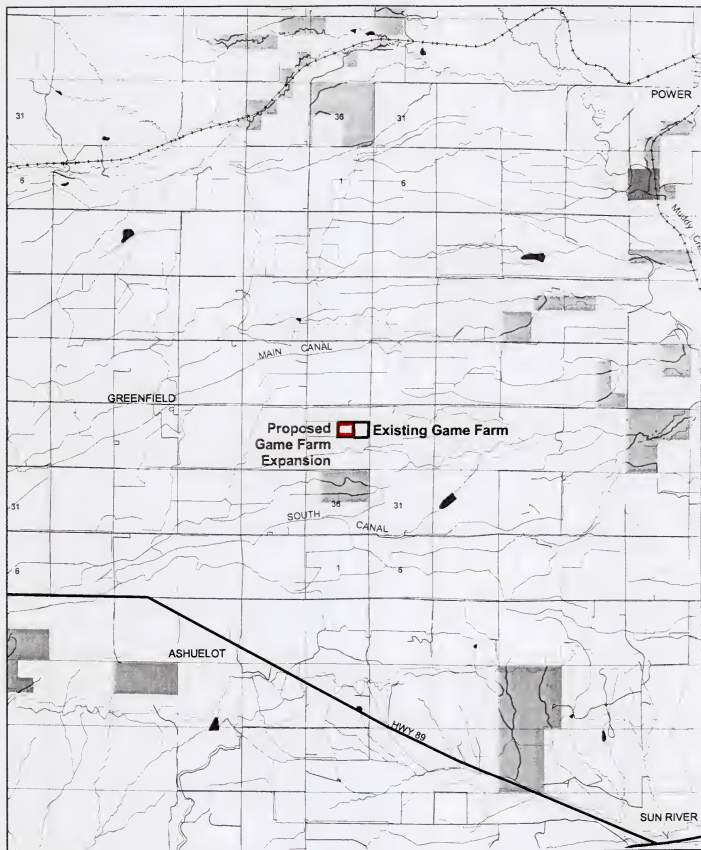
Note: Land Use Data Derived From Montana Public Lands US Bureau Of Land Management 1:250,000 Scale Maps. Topographic Base Derived From US Census Bureau 1:100,000 Scale TIGER Line Files. Contours Derived From 90 Meter USGS DEMs And Intervals Equal 200 Feet.

 Proposed Game Farm Expansion
 Existing Game Farm

Mixed Forest
 Other Agriculture
 Grass Rangeland
 Brush Rangeland
 Urban/Commercial
 Crop/Pasture

Land Use / Land Cover
Proposed Game Farm EA
War Bonnet Game Farm
Teton County, Montana
FIGURE 2





Note: Ownership Data Derived From Montana Public Lands US Bureau of Land Management 1:100,000 Scale Maps. Topographic Base Derived From US Census Bureau 1:100,000 Scale TIGER Line Files. Contours Derived From 90 Meter USGS DEMs And Intervals Equal 200 Feet.

- Proposed Game Farm Expansion
- Existing Game Farm
- Private Land
- Bureau of Land Management
- US Fish & Wildlife
- State of Montana

Land Ownership
Proposed Game Farm EA
War Bonnet Game Farm
Teton County, Montana
FIGURE 3

MAXIM

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WATER RESOURCES

Irrigation water is supplied to the bench from May through September via the Greenfield Main Canal located approximately 1 mile north of the site and the South Canal located approximately one mile south of the site. The site is not located in a floodplain. Surface water runoff from the site is limited by the earthen berms bordering the drainage ditches on three sides of the site. Runoff and groundwater intercepted by the ditches discharge to Cascade Coulee located approximately 1,000 feet south of the site. Cascade Coulee flows east approximately 6 miles to Muddy Creek, which in turn flows approximately 9 miles southeast to the Sun River.

Water for the farm house and support buildings is supplied by a well of unknown depth. A well 15 feet deep has been installed in the existing game farm area to supply water for the elk. Ten additional private wells located within a ½-mile radius of the site are used for irrigation, stockwater, and domestic purposes. These wells range from 10 to 35 feet deep and the depth to groundwater ranges from 7 to 15 feet. Water is most likely produced from the alluvium forming the bench, although the deeper wells may be completed in the underlying Virgelle Sandstone.

VEGETATION RESOURCES

Native vegetation at the proposed game farm site has been replaced with smooth brome, orchard grass, and alfalfa. Current production is about 4 to 5 tons per acre with irrigation. During game farm operation, the site would continue to be irrigated, although productivity would be slightly less due to the effects of grazing during the growing season. Total productivity of the 40-acre expansion pasture plus the existing 37-acre game farm site is estimated to be 308 tons (616,000 pounds) in an average year. The proposed game farm site does contain suitable habitat for noxious weeds such as spotted knapweed, leafy spurge, Canada thistle, and mullein, but these species were not evident during the site inspection.

WILDLIFE RESOURCES

Vegetative cover for wildlife in the area consists of trees and shelter belts planted around ranch headquarters and old homesteads. Many native wildlife species have already been displaced from the area due to habitat alteration. However, some adaptable wildlife species remain, including mule and white-tailed deer, pheasants, gulls, red foxes, and coyotes. There is also the possibility of an occasional passing bull elk, but these animals are only transitory through this area. Large carnivores and threatened and endangered species are not expected to occur in this area. However, the bald eagle does winter along the Sun River which is approximately 8 miles south of the proposed game farm and there is the possibility of a migratory eagle passing through this area. No winter range is present near the proposed game farm site (Figure 4).

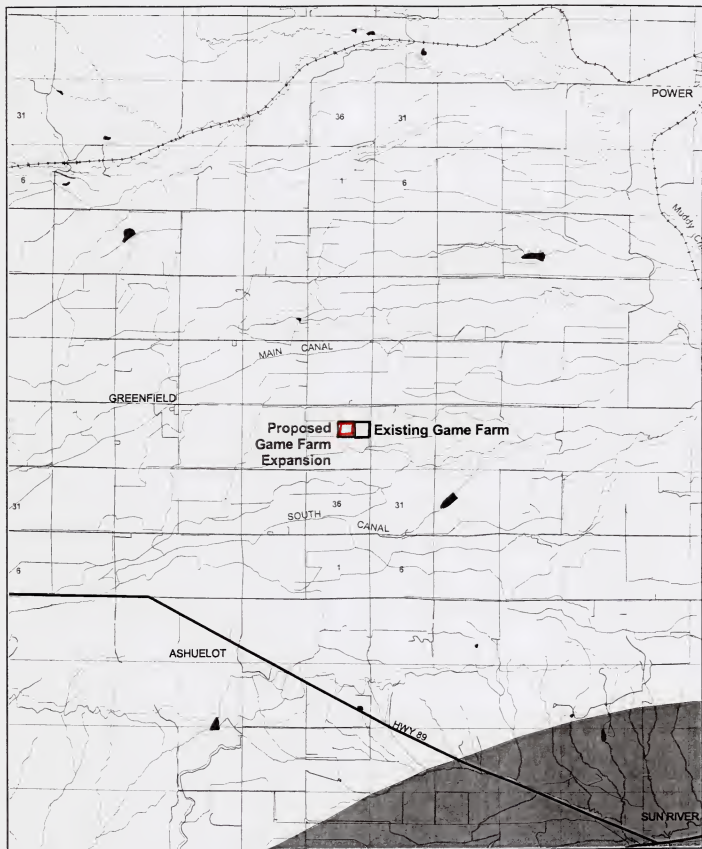
ENVIRONMENTAL CONSEQUENCES

The Proposed Action entails raising up to 150 elk on the 40-acre expansion and existing 37-acre game farm. Only resources that have potential adverse effects from the Proposed Action are summarized in this section. A detailed discussion of environmental consequences is contained in *Part II* of this EA.

LAND RESOURCES

The Proposed Action results in raising up to 150 elk on a total of 77 acres of irrigated hayland and is likely to have only a minor affect on soil and land resources. The site is nearly level and the soil is well drained with slight potential for erosion by water. As a result, water erosion is not likely to pose a problem so long as runoff toward the irrigation ditches is kept minimal. Localized loss of vegetative cover due to elk traffic





0 Miles 1.5

Note: Data Derived From Montana Fish, Wildlife and Parks 1:100,000 and 1:250,000 Scale Maps. Topographic Base Derived From US Census Bureau 1:100,000 TIGER Line Files. Contours Derived From 50 Meter USGS DEMs And Intervals Equal 200 Feet.

- Proposed Game Farm Expansion
- Existing Game Farm
- Mule Deer Winter Range
- Mule Deer General Range

**Big Game Distribution
Proposed Game Farm EA
War Bonnet Game Farm
Teton County, Montana
FIGURE 4**

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or overgrazing could increase wind erosion potential, and could also increase water erosion potential during periods of heavy rains or snowmelt. Hoof action in saturated or ponded areas could result in excess compaction and loss of soil structure and productivity.

WATER RESOURCES

The Proposed Action is likely to have a minor affect on water resources. Increased runoff and erosion could result from ground disturbances by the elk, particularly if the stocking density reaches 150 elk at the 77-acre site. However, runoff is limited by the earthen berms bordering the drainage ditches. Domestic elk fecal matter and nutrient-enriched water could affect the quality of groundwater and surface water in the vicinity of the site, particularly during snowmelt or major precipitation events. Groundwater is very shallow in this area (7 to 15 feet below grade) and wells are located on adjoining properties. Water infiltrated from the site could be intercepted by the drainage ditches and discharge through Cascade Coulee to Muddy Creek. Stocking the site with up to 150 elk on a year-round basis would likely have a similar to slightly greater affect than stocking cattle from late fall through early spring.

VEGETATION RESOURCES

The Proposed Action plans to place up to 100 adult elk on a total of 77 acres, for a maximum stocking density of 0.77 acre per adult elk. The annual forage production at the 77-acre game farm would potentially meet the year-long forage needs of 100 adult elk assuming the enclosure can be irrigated with the same frequency as currently employed for hay production and that the long-term grazing impacts do not decrease forage production significantly. However, during the fall and winter, field dried hay is not likely to meet the nutritional requirements of elk and supplemental feed would be required.

Disturbed sites around feeding areas or handling facilities would provide an opportunity for weeds to become established. Weed seeds could potentially be imported into the area with feed for the elk. The intensive stocking rate would also encourage the establishment of weeds.

WILDLIFE RESOURCES

When the proposed game farm expansion is completed, wild deer would be excluded from an additional 40 acres of cropland. This habitat is widely distributed within the Greenfields Irrigation Project and the loss of 40 acres of hay would not be a significant loss. Currently, vegetative cover appears to be more important to deer and pheasants in this area than forage and there would be no loss of vegetative cover resulting from this project. The proposed game farm is near the farm headquarters and this area probably receives very little use by wild ungulates due the presence of people, dogs, and livestock.

The proposed game farm expansion is not large enough to significantly influence any seasonal movement of deer through this area. The daily movements of a few deer may be changed to a minor degree but this would not be significant. Due to the upland location of the proposed game farm there would be no impacts to aquatic systems beyond those already related to intensive farming and grazing that presently occurs in this area. Pheasants and other larger birds, such as falcon in pursuit of prey, might fly into the fence and be fatally injured. This would effect individuals, but not populations.

RISKS/HEALTH HAZARDS

There is minimal potential for transmission of water-borne disease pathogens, if present, to be transported off the game farm site. The game farm is nearly level, all irrigation ditches are bermed, and irrigation of the proposed game farm would be with a wheel line. This risk is further reduced because of disease testing requirements for game farm animals.



There is potential for game farm elk to carry or become infected with a contagious wildlife parasite or disease such as tuberculosis, and then come in contact (through-the-fence, nose-to-nose, nose-to-soil, or ingress/egress) with livestock, wild deer, elk or other wildlife. Potential for disease transmission from game farm elk is mitigated by DoL disease testing requirements. Fence integrity must be maintained to minimize the potential for ingress and egress. Chronic wasting disease has also been detected in game farm elk, but the mode of transmission is unknown and there is no test for this disease in living animals. There is no evidence of CWD transmission to domestic livestock or humans.

During preparation of the EA for the existing game farm enclosure, the applicant indicated his intention to occasionally allow members of the public to harvest or shoot game farm elk in the Phase 1 pasture. All shooting in the Phase 1 pasture would be toward the west and southwest away from the direction of houses and roads to the north and east. The applicant proposes that shooting of elk by the public would also be allowed within the Phase 5 and 6 pastures comprising the 40-acre expansion. All shooting in the Phase 5 and 6 pastures would be directed toward the south and southwest away from any houses and roads to the east, north, and west.

CUMULATIVE EFFECTS

The Proposed Action would result in potential impacts that are individually minor, but not cumulatively significant. The proposed game farm, in conjunction with the existing game farm, would place up to 150 elk on 77 acres. Given the site conditions and sparse population in the area, the cumulative effects are expected to be minor.

EA CONCLUSION

MEPA and game farm statutes require FWP to conduct an environmental analysis for game farm licensing as described in the Introduction of this Summary. FWP prepares EAs to determine whether a project would have a significant effect on the environment. If FWP determines that a project would have a significant impact that could not be mitigated to less than significant, the FWP would prepare a more detailed EIS before making a decision.

Based on the criteria evaluated in this EA, an EIS would not be required for the War Bonnet Game Farm. The appropriate level of analysis for the Proposed Action is a mitigated EA because all impacts of the Proposed Action have been accurately identified in the EA, and all identified significant impacts would be mitigated to minor or none.

MITIGATION MEASURES

The mitigation measures described in this section address both minor and significant impacts associated with the proposed War Bonnet Game Farm. FWP would require stipulations to mitigate all potentially significant impacts resulting from the Proposed Action. Potential minor impacts from the Proposed Action are addressed as mitigation measures that are strongly recommended to remain in compliance with state and federal environmental laws, but are not required.

REQUIRED STIPULATIONS

The following stipulation is imposed by FWP for the proposed expansion and is designed to mitigate significant impacts identified in the EA to below the level of significance:



- (1) *Shooting in the War Bonnet expansion pasture using high-powered rifles must be directed to the south or southwest in order to avoid residences located within 1 mile of the expansion. A guide or representative of the game farm familiar with the surrounding terrain must accompany each harvester in the expansion pasture to ensure that shooting does not occur toward residences or vehicles on nearby roads.*

This stipulation is imposed to mitigate a potentially significant risk to public health and safety due to the proximity of residences and roads to the game farm expansion. The requirement to have a guide with each elk harvester to be sure shooting does not occur in a direction toward the nearby residence located east, north, and west of the game farm would reduce the chances of impacting human health and safety.

RECOMMENDED MITIGATION MEASURES:

The following mitigation measures address minor impacts identified in the EA that are likely to result from the Proposed Action.

Land Resources

- Use coated steel or wood fence posts due to the risk of corrosion posed by the alkaline soil.
- Maintain a reasonable stocking rate within the game farm enclosure to maximize vegetative cover and minimize runoff, erosion, and potential changes in soil structure.
- Minimize stock traffic in ponded or saturated soil areas, if they develop.

Air Resources

- Use appropriate dust management activities, including spraying water on unpaved roads during the dry season, vegetating exposed ground where possible, protecting soil piles from wind erosion, and limiting ground disturbances to the area necessary to complete the job.
- Spread waste during cool weather or in the morning during warm, dry weather. Carcasses should not be disposed of in or adjacent to water bodies, roads, and ditches.

Water Resources

- Maintain a reasonable stocking rate in the proposed game farm area to mitigate potential impacts from erosion and fecal matter. Potential water quality impacts also could be minimized by properly disposing dead animals and excess fecal material to a site that is isolated from surface water and groundwater (disposal must meet county regulations for solid waste).
- Control surface water discharges from the game farm site, if they occur, by employing BMPs where runoff could enter the drainage ditches bordering the site. The BMPs may include maintaining existing earthen berms and vegetative buffer zones, or deploying straw bale dikes and/or silt fences.

Vegetation Resources

- Provide supplemental feed to the elk during fall and winter to reduce the probability of overgrazing in the enclosure and to provide for the nutritional requirements of elk.



- Monitor the proposed game farm site for invasion of noxious weeds and treat affected areas in a timely manner.

Fish and Wildlife Resources

- Store hay, feed, and salt away from exterior fences, or in buildings.
- Feed game farm animals at the interior of the enclosure and not along the perimeter fence.
- Remove snow on either side of the enclosure fence as required to prevent ingress and egress.

Noise

- Limit noisy construction activities to daylight hours and complete work as quickly as possible.
- Reduce the number of bull elk during the rut if excess noise from bugling results in substantial complaints.

Cultural Resources

- Mitigate impacts to cultural resources by stopping work in the area of any observed archeological artifact. Report discovery of historical objects to the Montana Historical Society in Helena.



ENVIRONMENTAL ASSESSMENT CHECKLIST

PART I. GAME FARM LICENSE APPLICATION

Montana Fish, Wildlife & Park's authority to regulate game farms is contained in sections 87-4-406 through 87-4-424, MCA and ARM 12.6.1501 through 12.6.1519.

1. **Name of Project:** War Bonnet Game Farm

Date of Acceptance of Completed Application: April 26, 1999

2. **Name, Address and Phone Number of Applicant(s):**

Dion L., Sharon R., Justin G., and Jordan D. Hager
170 9th Lane Northeast
Fairfield, MT 59436
(406) 467-2985

3. **If Applicable:**

Estimated Construction/Commencement Date: Summer 1999

Estimated Completion Date: Fall 1999

Is this an application for expansion of existing facility or is a future expansion contemplated?

This is an application to add 40 acres to an existing 37-acre game farm.

4. **Location Affected by Proposed Action (county, range and township):**

Teton County SW ¼ of NE ¼, Section 25, Township 22 North, Range 2 West

5. **Project Size:** Estimate the number of acres that would be directly affected that are currently:

(a) Developed:	(d) Floodplain...	_____ acres
residential.....	_____ acres	
commercial.....	_____ acres	
(b) Open Space/Woodland Areas.....	(e) Productive:	
_____ acres	irrigated cropland. 40	_____ acres
	dry cropland.....	_____ acres
	forestry.....	_____ acres
	rangeland.....	_____ acres
(c) Wetlands/Riparian Areas.....	other.....	_____ acres
_____ acres		



6. Map/site plan:

The following maps are included in the introductory summary of this EA:

- FIGURE 1 War Bonnet Game Farm Site Map
- FIGURE 2 War Bonnet Game Farm Site Map showing Land Use/Land Cover
- FIGURE 3 War Bonnet Game Farm Site Map showing Land Ownership
- FIGURE 4 War Bonnet Game Farm Site Map showing Big Game Distribution

7. Narrative Summary of the Proposed Action or Project including the Benefits and Purpose of the Proposed Action:

FWP received a completed application on April 19, 1999 to develop an expansion to an existing game farm. The application for the expansion names the facility the War Bonnet Game Farm; the existing game farm is licensed as the Covered Wagon Game Farm. The proposed game farm expansion is located in Teton County, approximately 8 miles east of Fairfield and 3 miles east of Greenfield, Montana. The Proposed Action consists of constructing a 40-acre enclosure east of the existing 37-acre game farm enclosure. Quarantine and handling facilities at the existing game farm would also be used for elk at the expansion pasture.

The site is currently used as irrigated hayland. Under the Proposed Action, hay production would continue in the presence of a year-round elk population, but the hay would be harvested directly by the elk rather than being cut and stored for winter fodder. The maximum number of elk at the game farm would be increased from 60 elk at the existing 37-acre facility to a maximum of 150 elk at the expanded facility totaling 77 acres. As a result, the maximum size herd at the completed game farm would consist of up to 50 bulls, 50 cows, and 50 calves. Boarding of elk may be used as an economic means to increase the size of the herd. The applicant would breed, sell, and dispose of domestic elk in accordance with Montana game farm and disease control requirements stipulated in Montana statute and administrative rules. The game farm would provide meat, antlers, and trophy sales, as well as elk breeding stock.

The existing game farm consists of Phases 1, 2, 3, and 4. Phases 5 and 6 comprising the proposed expansion area would be completed during 1999. Fence construction for the expansion would be in accordance with FWP requirements in ARM 12.6.1531. The Phase 4 and Phase 6 pastures would be separated by a single length of fencing. A gate would be located in the south fence of Phase 6. An alley approximately 20 feet wide would separate the east fence of Phase 5 from the west fence of Phase 3. Gates would be installed in the Phase 5 and Phase 3 fencing near the south end of the alley to allow passage between these two pastures by crossing the alley. A gate would seal the north end of the alley and would be kept closed at all times when not in immediate use to access the alley.

During preparation of the EA for the existing game farm enclosure, the applicant indicated his intention to occasionally allow members of the public to harvest or shoot game farm elk in the Phase 1 pasture. All shooting in the Phase 1 pasture would be toward the west and southwest away from the direction of houses and roads to the north and east. The applicant proposes that shooting of elk by the public would also be allowed within the Phase 5 and 6 pastures comprising the 40-acre expansion. All shooting in the Phase 5 and 6 pastures would be directed toward the south and southwest away from any houses and roads to the east, north, and west.



8. Listing of any other Local, State or Federal agency that has overlapping or additional jurisdiction:

(a) Permits:

Agency Name	Permit	Approval Date and Number
Department of Livestock	approval of quarantine and handling facility	Pending

(b) Funding:

Agency Name	Funding Amount
none	

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

Agency Name	Type of Responsibility
Montana Department of Livestock	disease control
Montana Department of Environmental Quality (MDEQ)	water quality, air quality, waste management
Montana State Historical Preservation Office (SHPO)	cultural resources
Montana Department of Natural Resources and Conservation (DNRC)	water rights
Natural Resource Conservation Service (NRCS)	soil conservation
Teton County Conservation District	stream crossings
U.S. Army Corps of Engineers (COE)	wetlands
Teton County Weed Control District	weed control

9. List of Agencies Consulted During Preparation of the EA:

Montana Department of Livestock
Montana Department of Environmental Quality
Montana State Historical Preservation Office
Montana Bureau of Mines and Geology
Montana Department of Natural Resources and Conservation
U.S. Department of Agriculture, Natural Resource Conservation Service
Teton County Conservation District
U.S. Forest Service

REFERENCES:

Hager, Dion. 1999. Application For A Game Farm Expansion completed April 10, 1999, War Bonnet Elk Farm, 170 Ninth Lane Northeast, Fairfield, Montana.



PART II. ENVIRONMENTAL REVIEW

This section of the EA presents results of an environmental review of the proposed War Bonnet Game Farm (Proposed Action). The assessment evaluated direct and indirect impacts and cumulative effects of the Proposed Action on the following resources of the physical environment: land, air, water, vegetation, fish and wildlife; and the following concerns of the human environment: noise, land use, human health risk, community impacts, public services and taxes, aesthetics and recreation, and cultural and historical resources. Impacts were determined to fall in one of four categories: unknown, none, minor and significant. For the purposes of this EA, and in accordance with ARM 12.6.1525, these terms are defined as follows:

EA DEFINITIONS

Cumulative Effects: Collective impacts on the physical and human environment of the Proposed Action when considered in conjunction with other past and present actions related to the Proposed Action by location or generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impacts statement evaluation, or permit processing procedures.

Unknown Impacts: Information is not available to facilitate a reasonable prediction of potential impacts.

Significant Impacts: A determination of significance of an impact in this EA is based on individual and cumulative impacts from the Proposed Action. If the Proposed Action results in significant impacts that can not be effectively mitigated, FWP must prepare an EIS. The following criteria are considered in determining the significance of each impact on the quality of the human environment:

- severity, duration, geographic extent and frequency of occurrence of the impact;
- probability that the impact would occur if the Proposed Action occurs;
- growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative effects;
- quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources or values;
- importance to the state and to society of each environmental resource or value that would be affected;
- any precedent that would be set as a result of an impact of the Proposed Action that would commit FWP to future actions with significant impacts or a decision in principle about such future actions; and
- potential conflict with local, state, or federal laws, requirements, or formal plans.

Reasonable Stocking Rate: The density of animals appropriate to maintain vegetative cover in pasture condition that minimizes soil erosion from major precipitation events and snowmelt. Factors to consider in determining an overall reasonable stocking rate include vegetation type and density, ground slope, soil type, and precipitation.



PHYSICAL ENVIRONMENT

1. LAND RESOURCES	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	Would the Proposed Action result in:	UNKNOWN	NONE	MINOR	SIGNIFICANT	
a. Soil instability or changes in geologic substructure?			X			
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil which would reduce productivity or fertility?				X		Yes 1(b)
c. Destruction, covering or modification of any unique geologic or physical features?			X			
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?			X			

AFFECTED ENVIRONMENT:

The proposed War Bonnet Game Farm expansion is located on the Second Bench of the Greenfield Irrigation District. The Second Bench slopes eastward approximately 20 feet per mile and is bounded by Spring Coulee on the north and Cascade Coulee on the south. The predominant land use on the bench is irrigated farming of small grains and forage crops, and grazing cattle or sheep.

The proposed 40-acre game farm expansion lies at an elevation of approximately 3900 feet and occupies one quarter of a quarter-section. The existing 37-acre game farm is located immediately to the east. The farm house and support buildings adjoin the northeast corner of the existing enclosure (**Figure 1**). The site has been mechanically leveled and is currently used as irrigated hayland. The proposed expansion area would continue hay production in the presence of a year-round elk population (Hager, pers. commun.). The north, west, and south sides of the site are bounded by drainage ditches. Earthen berms along most of the length of the ditches limit runoff from the site. The outer perimeter fencing of the proposed expansion would be located approximately 20 feet from the drainage ditches (Hager, pers. commun.).

The Second Bench is a remnant of a broad alluvial plain deposited east of the Rocky Mountains during the Tertiary period (Alt and Hyndman, 1972). During the past few million years, streams have eroded valleys into this formerly extensive plain. Geologic materials at the site consist of Tertiary alluvium and the underlying Cretaceous Virgelle Sandstone, Marias River Formation, and Blackleaf Formation (MBMG, 1994).

Soil information for the site is available from unpublished working draft soil maps provided by the Natural Resources Conservation Service field office in Choteau, Montana. The working maps for the site show the soil mapping unit as Rothiemay-Niart clay loams, 0 to 4 percent slopes. Soils in this map unit are a complex of about 50% Rothiemay series soils and 40% Niart series soils with small inclusions of other map units (USDA-NRCS, 1998). The Rothiemay and Niart series consist of deep, well drained soils formed in alluvium and occupy terraces and slightly concave positions adjacent to intermittent drainages (USDA-SCS, 1982). Clay content ranges from 18 to 35% and the soil reaction is slightly to moderately alkaline in both soil units. There is a risk of corrosion to uncoated steel due to soil alkalinity. Both soils are calcareous at depth with 15 to 60% lime accumulated in the lower subsoil horizon. Erosion hazard for these soils is slight or moderate from wind and slight from water.



PROPOSED ACTION:

- 1b The Proposed Action of raising up to 150 elk on a total of 77 acres of irrigated hayland is likely to have a minor affect on soil and land resources. The site is nearly level and the soil is well drained with slight potential for erosion by water. As a result, water erosion is not likely to pose a problem so long as runoff toward the irrigation ditches is kept minimal. Localized loss of vegetative cover due to elk traffic or overgrazing could increase wind erosion potential, and could also increase water erosion potential during periods of heavy rains or snowmelt. Hoof action in saturated or ponded areas could result in excess compaction and loss of soil structure and productivity.

NO ACTION:

The No Action Alternative would entail continued use of the site as irrigated hayland. The No Action Alternative would likely not affect the current condition of the property.

CUMULATIVE EFFECTS:

As the site is already used for agricultural production and an adjacent 37-acre game farm, the cumulative effect of game farm operations is expected to be negligible. The site does not contain any unique or significant soil or land resources that would be lost due to the proposed land use.

COMMENTS:

Required Stipulations: None

Recommended Mitigation Measures:

- Use coated steel or wood fence posts due to the risk of corrosion posed by the alkaline soil.
- Maintain a reasonable stocking rate within the game farm enclosure to maximize vegetative cover and minimize runoff, erosion, and potential changes in soil structure.
- Minimize stock traffic in ponded or saturated soil areas, if they develop.

REFERENCES:

Alt, David D. and Hyndman, Donald W. 1972 Roadside Geology of the Northern Rock Mountains, Mountain Press Publishing Company, Missoula, Montana.

Hager, Dion. 1999. War Bonnet Game Farm owner, personal communication with Dr. Craig Knowles, FaunaWest Wildlife Consultants, on June 5, 1999.

Montana Bureau of Mines and Geology (MBMG). 1994. Preliminary Geologic Map of the Great Falls 1 degree X 2 degree quadrangle, compiled by Mervin J. Bartholomew, Susan M. Vuke, and Richard B. Berg, 1991 (1994). Scale 1:250,000.

U.S. Department of Agriculture (USDA), Soil Conservation Service (SCS). 1982. Soil Survey of Cascade County Area, Montana. USDA SCS in cooperation with Montana Agricultural Experiment Station. USDA, Washington, D.C. 329 pages with plates.

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 1998. Unpublished soil survey data provided by Choteau field office, March 1998.



PHYSICAL ENVIRONMENT

2. <u>AIR</u> Would the Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Emission of air pollutants or deterioration of ambient air quality?			X		Yes	2(a)
b. Creation of objectionable odors?			X		Yes	2(b)
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				

AFFECTED ENVIRONMENT:

The proposed game farm site is situated on an agricultural bench served by dirt roads. The area is sparsely populated with no apparent air quality problems. The area is not classified for air quality attainment status (MDEQ, 1997).

PROPOSED ACTION:

- 2(a) Impacts to air quality from fence construction and road use may result in short-term minor increases in particulate matter in ambient air.
- 2(b) Odor problems may result from animal waste in areas where elk congregate to feed. Odors resulting from elk are likely similar to those resulting from the cattle currently at the site. Neighbors located within a 1-mile radius of the site are also engaged in agriculture.

NO ACTION:

The No Action Alternative entails continued use of the site to grow hay.

CUMULATIVE EFFECTS:

As the site is already used for agricultural production and an adjacent 37-acre game farm, the cumulative effect of game farm operation is expected to be negligible.

COMMENTS:

Dust and odor are not expected to be of significant concern at the proposed game farm site due to the sparse population in this area. If dust and/or odor problems arise, mitigation measures can be implemented.

Required Stipulations: None



Recommended Mitigation Measures:

- Use appropriate dust management activities, including spraying water on unpaved roads during the dry season, vegetating exposed ground where possible, protecting soil piles from wind erosion, and limiting ground disturbances to the area necessary to complete the job.
- Spread waste during cool weather or in the morning during warm, dry weather. Carcasses should not be disposed of in or adjacent to water bodies, roads, and ditches. These and other waste management practices are described in "Guide to Animal Waste Management and Water Quality Protection in Montana" (MDEQ, 1996).

REFERENCES:

Montana Department of Environmental Quality (MDEQ). 1996. Guide to Animal Waste Management and Water Quality Protection in Montana. Helena, MT.

Montana Department of Environmental Quality (MDEQ). 1997. Montana Air Quality Non-Attainment Areas. Revised January, 1997.



PHYSICAL ENVIRONMENT

3. WATER	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
Would the Proposed Action result in:						
a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?			X		Yes	3(a)
b. Changes in drainage patterns or the rate and amount of surface runoff?		X				
c. Alteration of the course or magnitude of flood water or other flows?		X				
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?			X		Yes	3(f)
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?			X		Yes	3(f)
i. Violation of the Montana non-degradation statute?		X				
j. Effects on any existing water right or reservation?		X				
k. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
l. Effects on other water users as a result of any alteration in surface or groundwater quantity?		X				

AFFECTED ENVIRONMENT:

Irrigation water is supplied to the Second Bench from May through September via the Greenfield Main Canal located approximately 1 mile north of the site and the South Canal located approximately 1 mile south of the site (Figure 1). The site is not located in a floodplain (Karl Christians, pers. commun.). Surface water runoff from the site is limited by earthen berms along the drainage ditches bounding the north, east, and south sides of the site. Runoff and groundwater intercepted by the ditches discharge to Cascade Coulee located approximately 1,000 feet south of the site. Cascade Coulee flows east approximately 6 miles to Muddy Creek, which in turn flows approximately 9 miles southeast to the Sun River (Figure 2).

Water for the Hager house and support buildings located immediately northeast of the existing game farm is supplied by a well in the vicinity of the house (Hager, pers. commun.). The depth of this well is unknown. A 15 feet deep well was installed in the northwest corner of the existing game farm to supply water for the elk. Ten additional wells located within a ½-mile radius of the site are used for irrigation, stockwater, and domestic purposes (DNRC, 1998; MBMG, 1998). Depth to groundwater in these wells ranges from 7 to 15 feet and total well depths range from 10 to 35 feet. Based on the water levels and



well depths, water is most likely being produced from the Tertiary alluvium forming the bench. Some of the deeper wells may be completed in the underlying Cretaceous Virgelle Sandstone (MBMG, 1994).

PROPOSED ACTION:

- 3(a) The Proposed Action of raising elk on an additional 40 acres of irrigated hayland is likely to have a minor affect on water resources. Increased runoff and erosion could result from ground disturbances by the domestic elk, particularly if the stocking density reaches 150 elk at the 77-acre site. However, runoff is limited by the earthen berms bordering the drainage ditches along most of the site.

If vegetative cover is reduced significantly, the game farm could meet the definition of an "animal feeding operation" (ARM 17.30.1304(3)). If water containment structures are needed on the site to control runoff and do not have the capacity for the 25-year, 24-hour storm, a "concentrated animal feeding operations" (CAFO) permit must be obtained to permit the discharge. A CAFO permit probably would not be required for the War Bonnet Game Farm.

- 3(f) Domestic elk fecal matter and nutrient-enriched water could affect the quality of groundwater and surface water in the vicinity of the site, particularly during snowmelt or major precipitation events. Groundwater is very shallow in this area (7 to 15 feet below grade) and wells are located on adjoining properties. Water infiltrated from the site could be intercepted by the drainage ditches and discharge through Cascade Coulee to Muddy Creek.

NO ACTION:

Current hydrologic conditions are not expected to change under the No Action Alternative.

CUMULATIVE EFFECTS:

The general area is used for intensive farming and ranching activities. These activities likely affect water quality due to increased sedimentation and nutrient loading. Use of the land to raise elk is not expected to significantly change hydrologic conditions at the site. Therefore, the cumulative effect of using the 40 acre site as a game farm would not likely cause any cumulative effects on water resources.

COMMENTS:

Required Stipulations: None.

Recommended Mitigation Measures:

Due to potential minor impacts identified above from increased erosion, runoff, and fecal matter, several mitigation measures are recommended.

- Maintain a reasonable stocking rate (see definition under EA Definitions, *Part II - Environmental Review*) in the proposed game farm area to mitigate potential impacts from erosion and fecal matter. Potential water quality impacts also could be minimized by properly disposing dead animals and excess fecal material to a site that is isolated from surface water and groundwater (disposal must meet county regulations for solid waste).
- Control surface water discharges from the game farm site, if they occur, by employing BMPs where runoff could enter the drainage ditches bordering the site. The BMPs may include maintaining existing earthen berms and vegetative buffer zones, or deploying straw bale dikes and/or silt fences.



REFERENCES:

Hager, Dion. 1998. War Bonnet Game Farm owner, personal communication with Chris Cronin, Maxim Technologies, Inc. on April 6, 1998.

Christians, Karl. 1998. Montana Department of Natural Resources and Conservation, Flood Plain Bureau, personnel communication with Chris Cronin, Maxim Technologies, Inc. April 6, 1998.

Montana Bureau of Mines and Geology (MBMG). 1994. Preliminary Geologic Map of the Great Falls 1 degree X 2 degree quadrangle, compiled by Mervin J. Bartholomew, Susan M. Vuke, and Richard B. Berg, 1991 (1994). Scale 1:250,000.

Montana Bureau of Mines and Geology (MBMG). 1998. Computer file search of well records. Butte MBMG office. April 1998.

Montana Department of Natural Resources and Conservation (DNRC). 1998. Computer file search of well records. Helena DNRC office. February, 1998.



PHYSICAL ENVIRONMENT

4. VEGETATION Would the Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Changes in the diversity, productivity or abundance of plant species?			X		Yes	4(a)
b. Alteration of a plant community?		X				
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?			X		Yes	4(e)

AFFECTED ENVIRONMENT:

The proposed 40-acre expansion pasture and existing 37-acre game farm are located on relatively level agricultural land comprised almost entirely of irrigated hayland. All native vegetation has been replaced with smooth brome, orchard grass, and alfalfa. Forage production on the irrigated hayland is about 4 to 5 tons per acre during most years (Dion Hager, pers. commun.). During game farm operation, the site would be irrigated and productivity would be expected to be slightly less due to the effects of grazing during the growing season. Total forage production at the proposed expansion and existing game farm site is estimated at 380 tons (616,000 pounds). There are no federally-listed threatened or endangered plant species expected to occur within the proposed game farm site. The proposed game farm site does contain suitable habitat for noxious weeds such as spotted knapweed, leafy spurge, Canada thistle, and mullein, but these species were not evident during the site inspection.

PROPOSED ACTION:

- 4(a) The Proposed Action plans to place up to 100 adult elk on a total of 77 acres, for a maximum stocking density of 0.77 acre per adult elk. These elk would use the proposed game farm on a year-long basis. The annual forage consumption for 100 adult elk would be approximately 401,500 pounds. The forage produced at the 77-acre game farm would potentially meet the year-long forage needs of 100 adult elk assuming the enclosure can be irrigated with the same frequency as currently employed for hay production and that the long-term grazing impacts do not decrease forage production significantly. However, during the fall and winter, field dried hay is not likely to meet the nutritional requirements of elk and supplemental feed would be required at this time. There would be no impacts to native vegetation because it has already been lost from this site.
- 4(e) Although noxious weeds were not apparent at this site, disturbed sites around feeding areas or handling facilities would provide an opportunity for weeds to become established. Weed seeds could potentially be imported into the area with feed for the elk. The intensive stocking rate would also encourage the establishment of weeds. Should noxious weeds be detected, a weed control program should be implemented to control the weeds.

NO ACTION:

The No Action Alternative would likely result in the continuation of the present management. The site would be continued to be used as irrigated hayland.



CUMULATIVE EFFECTS:

There are no anticipated cumulative effects on vegetation resources associated with the proposed project. The proposed game farm site and surrounding area, including the adjacent 37-acre game farm, has been extensively cultivated with little native vegetation remaining.

COMMENTS:

Required Stipulations: None

Recommended Mitigation Measures:

- Provide supplemental feed to the elk during fall and winter to reduce the probability of overgrazing in the enclosure and to provide for the nutritional requirements of elk.
- Monitor the proposed game farm site for invasion of noxious weeds and treat affected areas in a timely manner.

REFERENCES:

Hager, Dion. 1999. War Bonnet Game Farm owner, personal communication with Dr. Craig Knowles, FaunaWest Wildlife Consultants, on June 5, 1999.



PHYSICAL ENVIRONMENT

5. FISH/WILDLIFE	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
Would the Proposed Action result in:						
a. Deterioration of critical fish or wildlife habitat?		X				5(a)
b. Changes in the diversity or abundance of game species?			X		Yes	5(b)
c. Changes in the diversity or abundance of nongame species?		X				
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?			X		Yes	5(e)
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				5(f)
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?		X				

AFFECTED ENVIRONMENT:

This area originally was dominated by the needle-and-thread grass/blue grama habitat (Mueggler and Stewart, 1980) and the only vegetative cover is trees and shelter belts planted around ranch headquarters and old homesteads. Many native wildlife species have already been displaced from this area due the degree of habitat alteration. However, some adaptable wildlife species remain in this area such as a few mule and white-tailed deer, pheasants, gulls, red foxes and coyotes (Hager and Quentin Kujula, pers. commun.). There is also the possibility of an occasional bull elk passing through this area, but these animals are only transitory through this area (Quentin Kujula, pers. commun.). Large carnivores and threatened and endangered species are not expected to occur in this area (Quentin Kujula, pers. commun.). However, the bald eagle does winter along the Sun River which is approximately 8 miles south of the proposed game farm and there is the possibility of a migratory eagle passing through this area. No winter range is present in the vicinity of the proposed game farm (FWP, 1995).

PROPOSED ACTION:

- 5(a) When the game farm expansion is completed, wild deer would be excluded from an additional 40 acres of irrigated cropland. This habitat is widely distributed within the Greenfields Irrigation Project and the loss of 40 acres of irrigated hayland would not be a significant loss. Currently, vegetative cover appears to be more important to deer and pheasants in this area than forage and there would be no loss of vegetative cover resulting from this project. The proposed game farm expansion is near the farm house and support buildings and this area probably receives very little use by wild ungulates due the presence of people, dogs, and livestock.

The proposed game farm site is not located within any critical big game winter range, nor is it located along a migration corridor. This specific site receives only occasional use by mule deer and white-tailed deer. The potential impacts on big game species would largely be limited to these few deer that reside in this general area. There are no perennial streams within the proposed game farm site and there would be no impacts to aquatic resources.



- 5(b) Fencing of 40 acres would be a minor impact because there are few wild deer in this area. In addition, the size of the proposed game farm expansion is relatively small. Even when considered together with the existing 37-acre game farm, it is sufficiently small to be well within the ability of deer to travel around during their normal daily movements. This area has been extensively impacted by agriculture for most of this century, and availability of agricultural habitat is not a limiting factor for wild deer. Wild elk can potentially pass through this area on occasion and could be attracted to the game farm especially during the rut. Bulls fighting through the fence and damaging the fence has been reported elsewhere. The proposed game farm fence would be located primarily on level ground. There would only be minimal opportunity for wild ungulates to enter the game farm because of the excellent conditions for fencing, and low density of wild deer and elk. Should deer or other wild ungulates enter the game farm, they would likely be destroyed rather than released back to the wild. These impacts may affect individuals but not populations. There is very little potential for large predators to pass through this area and be attracted to the elk in the enclosure.
- 5(e) The proposed 77-acre game farm is not large enough to significantly influence seasonal movement of deer through this area. It is well within the ability of deer on a daily basis to move around a parcel of this size. Due to the upland location of the proposed game farm, there would be no impacts to aquatic systems beyond those already related to the intensive farming and grazing that currently occurs in this area. Pheasants and other larger birds such as falcons in pursuit of prey might fly into the game farm fence and be fatally injured, but this would effect individual and not populations.
- 5(f) The proposed game farm is not likely to cause impacts to bald eagles, or peregrine falcons.

NO ACTION:

No wildlife related impacts are expected to occur under the No Action Alternative. The area would continue to be managed for hay production.

CUMULATIVE EFFECTS:

Together, the two game farm enclosures would exclude wild deer from 77 acres of land. Irrigated hayland and is readily available elsewhere nearby, and deer in this area are limited by cover and not by forage. As a result, cumulative impacts would be minor.

COMMENTS:

Required Stipulations: None

Recommended Mitigation Measures:

The following standard game farm management practices would help to minimize impacts to free ranging fish and wildlife species. Implementation of these practices is highly recommended and should be considered a form of mitigation.

- Store hay, feed, and salt away from exterior fences, or in buildings.
- Feed game farm animals at the interior of the enclosure and not along the perimeter fence.
- Properly dispose of dead animals and remove excess fecal material and waste feed from the game farm and deposit at an approved site not likely to be used by humans, and domestic and wild animals. The waste materials must be disposed of according to county solid waste regulations.



- Remove snow on either side of the enclosure fence as required to prevent ingress and egress.

REFERENCE:

Fish, Wildlife and Parks (FWP). 1995. Wildlife winter range data from FWP Information Services Unit, digitized at a scale of 1:250,000.

Hager, Dion. 1999. War Bonnet Game Farm manager, personal communication with Dr. Craig Knowles, FaunaWest Wildlife Consultants, on June 5, 1999.

Kujala, Quentin. 1998. Montana Fish, Wildlife and Parks biologist, personal communication with Dr. Craig Knowles, FaunaWest Wildlife Consultants, on April 6, 1998.

Mueggler, W.F. and W.L. Stewart. 1980. Grassland and shrubland habitat types of western Montana. USDA Forest Service GTR INT-66. 154 pp.



HUMAN ENVIRONMENT

6. <u>NOISE EFFECTS</u>	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	Would Proposed Action result in:	UNKNOWN	NONE	MINOR	SIGNIFICANT	
a. Increases in existing noise levels?			X		Yes	6(a)
b. Exposure of people to severe or nuisance noise levels?		X				

AFFECTED ENVIRONMENT:

The operation of agricultural equipment and livestock generate noise in the vicinity of the proposed game farm. Due to the sparse population, these sources of noise are likely not considered a problem.

PROPOSED ACTION:

- 6(a) The Proposed Action would result in a minor short-term increase in existing noise levels from fence construction activities conducted to develop the game farm expansion. Other noise expected from the proposed game farm operation would be from bull elk bugling during the mating season. There are approximately 10 residences within a 1-mile radius of the site and the nearest neighbor is located approximately 1,200 feet to the southeast of the proposed game farm expansion.

NO ACTION:

No impacts to existing noise levels are expected from the No Action Alternative.

CUMULATIVE EFFECTS:

No additional impacts from past, present, or reasonably foreseeable activities near the proposed game farm are anticipated.

COMMENTS:

Due to the sparse population and prevalence of agricultural and livestock operations, noise from the game farm operation should not cause a particular problem. If concerns due to construction noise are raised, mitigation measures can be employed.

Required Stipulations: None

Recommended Mitigation Measures:

- Limit noisy construction activities to daylight hours and complete work as quickly as possible.
- Reduce the number of bull elk during the rut if excess noise from bugling results in substantial complaints.



HUMAN ENVIRONMENT

7. LAND USE Would Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				
b. Conflict with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the Proposed Action?		X				
d. Conflict with any existing land use that would be adversely affected by the Proposed Action?		X				
e. Adverse effects on or relocation of residences?		X				

AFFECTED ENVIRONMENT:

The principal land use at the proposed game farm and vicinity is crop land and livestock pasture (**Figure 2**). There are approximately 10 residences within a 1-mile radius of the site and the nearest neighbor is located approximately 1,200 feet to the southeast of the proposed game farm expansion. The area is not zoned for a specific use.

PROPOSED ACTION:

The proposed game farm would be consistent with current agricultural land uses. The use of the proposed game farm area as an elk farm may increase the value of the land.

NO ACTION:

If the proposed game farm is not developed, use of the site would likely continue for raising hay.

CUMULATIVE EFFECTS:

Land use described in the Proposed Action is consistent with existing land use in the vicinity of the proposed game farm. Because no proposals or applications for future development in the vicinity of the proposed game farm are currently on file with Teton County, and no past or present activities have adversely affected the game farm area, no potential cumulative effects on land use from the Proposed Action and past, present and reasonably foreseeable actions to land use are anticipated.

COMMENTS:

Because impacts to land use are none to potentially positive, no mitigation measures are recommended.



HUMAN ENVIRONMENT

8. RISK/HEALTH HAZARDS Would Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Risk of dispersal of hazardous substances (including, but not limited to chemicals, pathogens, or radiation) in the event of an accident or other forms of disruption?			X		Yes	8(a)
b. Creation of any hazard or potential hazard to domestic livestock?			X		Yes	8(b)
c. Increased risk of contact and disease transmission or hybridization between game farm animals and wild game?			X		Yes	8(c)
d. Creation of any hazard or potential hazard to human health?				X	Yes	8(d)

AFFECTED ENVIRONMENT:

Cattle are pastured on lands surrounding the proposed game farm. There are approximately 10 residences located within a 1-mile radius of the site. Public roads are located ¼-mile east and north of the proposed game farm expansion and ½-mile to the west and south.

PROPOSED ACTION:

- 8(a) There is minimal potential for transmission of water-borne disease pathogens, if present, to be transported off of the game farm. The game farm is nearly level, all irrigation ditches are bermed and irrigation of the proposed game farm would be with a wheel line. This risk is further reduced because of game farm animal disease testing requirements. The route of chronic wasting disease (CWD) transmission at this time is unknown; therefore, the potential for transmission by soil, water or other media cannot be determined.
- 8(b) Infectious diseases can potentially be transmitted between game farm elk and domestic livestock. If brucellosis or tuberculosis should occur in the game farm animals, it could potentially be transmitted between species. However, cattle would only be present in this vicinity during winter and they would not be allowed inside the game farm enclosures.

Chronic wasting disease also has been detected in game farm elk, but the mode of transmission is unknown and there is no test for this disease in living animals. CWD has been a known wildlife disease for 30 years in Colorado and Wyoming. There is no evidence of CWD transmission to domestic livestock or humans.

The risk of disease being passed from game farm elk to domestic livestock can also be reduced by maintaining the fence integrity and following stipulations and mitigation measures described in this EA. Potential for disease transmission to domestic livestock from game farm animals is also mitigated through DoI disease testing requirements. All animals to be placed on this game farm are required to be tested for tuberculosis at the time of import, purchase and/or transportation to the game farm. A test for brucellosis is also required for all game farm animals that are sold or moved within the state, and is required for all game farm animals imported into Montana. Montana is presently a tuberculosis-free and brucellosis-free state (i.e., these diseases have not been diagnosed in domestic livestock). Each game farm is required to have access to an isolation pen



(quarantine facility) on the game farm or approved quarantine plan to isolate any animals that are imported or become ill. The state veterinarian can require additional testing and place herds under strict quarantine should problems arise.

- 8(c) There is potential for game farm elk to carry or become infected with a contagious wildlife disease or parasite such as tuberculosis, and then come in contact (through-the-fence, nose-to-nose, nose-to-soil, or ingress/egress) with wild deer, elk or other wildlife. Potential for disease transmission to wildlife from game farm animals is also mitigated through DoL disease testing requirements. The release of a contagious disease in the wild could impact native wildlife populations since limited numbers of mule and white-tailed deer are present in the vicinity of the proposed game farm. It is also possible that diseases and parasites carried by wild deer or elk could be introduced to the domestic elk with equally severe impacts. Ingress of wild deer or elk would likely result in the destruction of the trespassing animals. Spread of a contagious wildlife disease may directly or indirectly (depending on the nature of the disease) affect the human environment by reducing the number of wild deer and elk available for hunting or exposing hunters to diseases which are contagious to humans as well. Fence integrity must be maintained to minimize the potential for ingress and egress.

- 8(d) If tuberculosis or brucellosis were to be transmitted from domestic elk to wild elk and deer, hunters field dressing wild elk or deer would be subject to some risk of infection. Veterinarians and meat cutters working with diseased game farm animals are at risk of becoming infected with brucellosis or tuberculosis. Routine brucellosis and tuberculosis testing requirements for game farm animals offer a measure of surveillance to minimize risk to human health. Failure to comply with these requirements is grounds for license revocation.

During preparation of the EA for the existing game farm enclosure, the applicant indicated his intention to occasionally allow members of the public to harvest or shoot game farm elk in the Phase 1 pasture. All shooting in the Phase 1 pasture would be toward the west and southwest away from the direction of houses and roads to the north and east. The applicant proposes that shooting of elk by the public would also be allowed within the Phase 5 and 6 pastures comprising the 40-acre expansion. Approximately 10 residences are located within 1 mile of the expansion pasture (Figure 1). No residences are located south to southwest of the proposed expansion and the applicant owns the 80 acres due south of the expansion area. All shooting in the Phase 5 and 6 pastures would be directed toward the south and southwest away from any houses and roads to the east, north, and west. An earthen berm approximately 8 feet is located along the west boundary of the proposed expansion and provides additional protection from stray bullets to the west.

NO ACTION:

Risk/health hazards would not occur from the No Action Alternative, other than those that may be associated with the existing land use, including normal shooting activities associated with the hunting season.

CUMULATIVE EFFECTS:

There is an existing 37-acre game farm at the Hager ranch headquarters immediately east of the proposed 40-acre unit. Cumulatively there would be 77 acres of land fenced to exclude wild ungulates, and within these enclosures there could potentially be 150 elk. This is a large number of animals to hold on a small acreage.



COMMENTS:

Required Stipulations:

The following stipulation is imposed by FWP for the proposed expansion and is designed to mitigate significant impacts identified in the EA to below the level of significance:

- (1) *Shooting in the War Bonnet expansion pasture using high-powered rifles must be directed to the south or southwest in order to avoid residences located within 1 mile of the expansion. A guide or representative of the game farm familiar with the surrounding terrain must accompany each harvester in the expansion pasture to ensure that shooting does not occur toward residences or vehicles on nearby roads.*

This stipulation is imposed to mitigate a potentially significant risk to public health and safety due to the proximity of residences and roads to the game farm expansion. The requirement to have a guide with each elk harvester to be sure shooting does not occur in a direction toward the nearby residence located east, north, and west of the game farm would reduce the chances of impacting human health and safety.

Recommended Mitigation Measures:

The standard game farm mitigations listed in Section 5 (Fish/Wildlife) are also applicable to this section. In addition, risk of disease epidemic or heavy parasite infections among domestic elk can be minimized by maintaining a reasonable domestic elk stocking rate in relation to the enclosure size, periodic removal of domestic elk manure from concentration areas, and development of a disease immunization and parasite treatment protocol as applicable to domestic elk.



HUMAN ENVIRONMENT

9. COMMUNITY IMPACT Would Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Changes in historic or traditional recreational use of an area?		X				
f. Changes in existing public benefits provided by affected wildlife populations and wildlife habitats (educational, cultural or historic)?		X				
g. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		X				

AFFECTED ENVIRONMENT:

The proposed game farm would be located in a rural area adjacent to farm land and associated residences. The nearest town to the proposed game farm site is Fairfield, Montana, located approximately 8 miles to the west. A grade school is located approximately 3 miles west of the site in Greenfield (Figure 1), which is no longer a residential community. The proposed game farm site is surrounded by private property.

PROPOSED ACTION:

As a result of the distance to the nearest community, no adverse impacts to the community are expected from the proposed game farm. No employees would be hired as a result of the Proposed Action. While the Proposed Action may increase the income level for the applicant and increase taxes paid to the county, these increases would be relatively minor with respect to the community.

NO ACTION:

No adverse impacts to the community would result from the No Action Alternative.

CUMULATIVE EFFECTS:

No adverse impacts to the community are expected to result from the Proposed Action and past, present and reasonably foreseeable activities in the vicinity of the proposed game farm.

COMMENTS:

No mitigation measures are recommended with respect to community impacts.



HUMAN ENVIRONMENT

10. <u>PUBLIC SERVICES & TAXES</u> Would Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. A need for new or altered government services (specifically an increased regulatory role for FWP and Dept. of Livestock)?			X		No	10(a)
b. A change in the local or state tax base and revenues?			X		No	10(b)
c. A need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				

PROPOSED ACTION:

- 10(a) FWP and DoL would be required to have an increased work load associated with the game farm for fence and animal inspections and monitoring. For this relatively small game farm expansion, however, the increased work load is expected to be minor.
- 10(b) Placement of elk would increase the annual tax contribution of the proposed game farm, with collected taxes going toward the county general fund and local school district and a per capita tax that goes to the DoL. According to the Teton County Assessor's Office, elk are taxed at the same rate as purebred cattle. Estimated annual taxes due to Teton County from the proposed game farm would be between \$12 and \$25.52 per head, depending on the age and sex of the elk (Warhime, pers. commun.). According to DoL, the per capita tax is \$12 per head for game farm animals compared to \$1.20 per head for cattle (Schultz, 1997).

NO ACTION:

No additional taxes would be collected from the applicant under the No Action Alternative. The applicant would continue use the land to grow hay.

CUMULATIVE EFFECTS:

No adverse cumulative effects to public services, taxes, and utilities are anticipated to result from the Proposed Action and past, present and reasonably foreseeable activities in the vicinity of the proposed game farm.

COMMENTS:

No mitigation measures are recommended with respect to public services, taxes, and utilities.

REFERENCES:

Warhime, Elaine. 1998. Teton County Assessor's Office, personal communication with Chris Cronin, Maxim Technologies, Inc. on April 28, 1998.

Schultz, Luella. 1997. Department of Livestock, Animal Health Division. Memorandum to Alice Stanley, Maxim Technologies. October 27, 1997.



HUMAN ENVIRONMENT

11. AESTHETICS/RECREATION Would Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?		X				
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. Alteration of the quality or quantity of recreational/tourism opportunities and settings?		X				

AFFECTED ENVIRONMENT:

The game farm site is located on an agricultural bench. The property is surrounded by privately-owned land.

PROPOSED ACTION:

No adverse impacts to the public view, neighborhood character, or recreational opportunities in the area would result from the Proposed Action.

NO ACTION:

No adverse impacts to aesthetics or recreational opportunities in the area would result from the No Action Alternative.

CUMULATIVE EFFECTS:

No additional impacts from past, present, and reasonably foreseeable activities near the proposed game farm are anticipated.

COMMENTS:

No mitigation measures are recommended with respect to aesthetics and recreation.



HUMAN ENVIRONMENT

12. <u>CULTURAL & HISTORICAL RESOURCES</u> Would Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Destruction or alteration of any site, structure or object of prehistoric, historic, or paleontological importance?	X				Yes	12(a)
b. Physical change that would affect unique cultural values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				

AFFECTED ENVIRONMENT:

A cultural resource file search by the State Historical Preservation Office (SHPO, 1999) indicates that no historic or archeological sites have been identified at the proposed game farm site.

PROPOSED ACTION:

- 12(a) According to SHPO (1999), because no cultural resource inventory has been conducted in the area, there is a possibility that unknown or unrecorded cultural properties may be present at the site.

NO ACTION:

No impacts to unknown cultural resources are expected from the No Action Alternative unless other disturbances occur within the property.

CUMULATIVE EFFECTS:

No additional impacts from past, present, and reasonably foreseeable activities near the proposed game farm are anticipated.

COMMENTS:

Required Stipulations: None.

Recommended Mitigation Measures:

If archeological artifacts are observed during construction of the game farm fence or from other activities, work should stop in the area and the discovery reported to:

Montana Historical Society
Historic Preservation Office
1410 8th Avenue; P.O. Box 201202
Helena, Montana 59620
(406) 444-7715

If work stoppage in the area containing observed artifacts is not possible, record the location and position of each object, take photographs, and preserve the artifact(s).



REFERENCES:

Montana State Historic Preservation Office (SHPO). 1999. Letter from Phillip Melton (SHPO, Helena, MT) to Daphne Digrindakis (Maxim Technologies, Inc.), dated June 7, 1999.

SUMMARY

13. SUMMARY Would the Proposed Action, considered as a whole:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources which create a significant effect when considered together or in total.)		X				
b. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?			X		Yes	13(b)
c. Potentially conflict with the substantive requirements or any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts would be proposed?	X					13(d)
e. Generate substantial debate or controversy about the nature of the impacts that would be created?			X		Yes	13(d)

PROPOSED ACTION:

- 13(b) There is a potential of domestic elk carrying or becoming infected with a contagious wildlife disease or parasite such as tuberculosis or chronic wasting disease, and then coming in contact (through-the-fence, nose-to-nose, nose-to-soil, or ingress/egress) with wild deer, elk, or other wildlife. Release of a contagious disease in the wild could severely impact native wildlife populations. It is also possible disease and parasites carried by wild elk and deer could be introduced to domestic elk. Spread of a contagious wildlife disease may directly or indirectly (depending on the nature of the disease) affect the human environment by reducing the number of wild deer and elk available for hunting, or exposing hunters to diseases that are also contagious to humans.
- 13(d) The nature of impacts to wildlife from elk game farms is currently under debate in Montana and other states. The following issues are of the greatest concern with respect to game farms:
- Disease transmission from game farm elk to wildlife is possible if the game farm elk are diseased and have an opportunity to come into contact with wildlife.
 - Hybridization of Montana's game species resulting from the ingress/egress of animals.
 - Ingress potential of wild animals into the game farm. Ingressing elk and deer are generally killed, typically by FWP wardens, to prevent potential disease transmittal. Ingressing mountain lions and black bears may be immobilized and removed.
 - Theft of wild animals for financial gain on game farms.
 - Ethics of shooting domestic elk, deer, or other animals in a game farm enclosure.
 - Public safety from shooting operations.



Some of these issues are particularly controversial when game farms block migration routes or consume significant areas of land historically utilized by wild game. Inadequate perimeter fencing and fence monitoring by the game farm operator can also lead to ingress/egress events and nose-to-nose contact between wild game and game farm animals. Because the proposed game farm expansion area would not significantly block big game migration routes or consume a significant portion of land utilized by wild game, the controversial nature of the Proposed Action is minor.

SUMMARY EVALUATION OF SIGNIFICANCE CRITERIA

- a. **Does the Proposed Action have impacts that are individually minor, but cumulatively considerable? (A project may result in impacts on two or more separate resources which create a significant effect when considered together or in total.)**

No. Given the site conditions and sparse population in the area, cumulative effects are expected to be minor.

- b. **Does the Proposed Action involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?**

Yes. An unlikely, but extremely hazardous event should it occur, would be the spread of a disease or parasite from domestic elk to wild elk. The risk of this event occurring can be reduced by following the mitigation measures listed in Section 5 (*Fish/Wildlife*) and Section 8 (*Risk/Health Hazards*) of this EA, and regular disease surveillance.

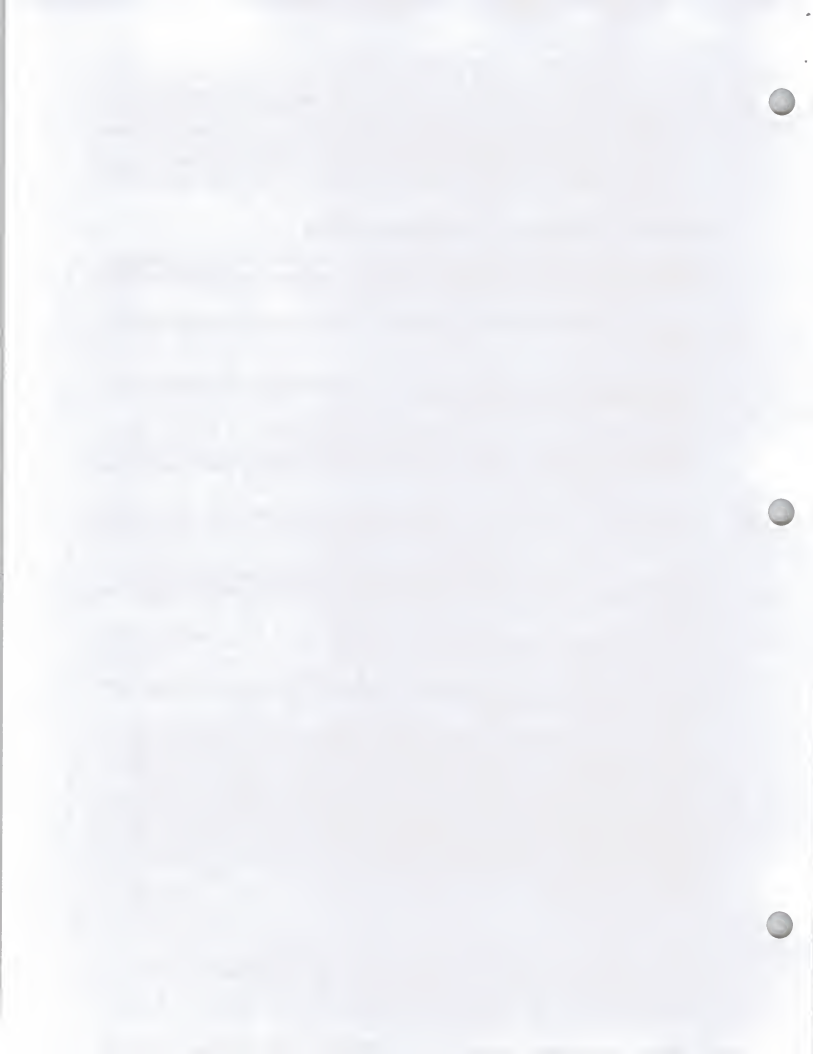
On April 9, 1999, new administrative rules that were adopted in the Montana Board of Livestock became effective regarding surveillance of captive cervids with respect to CWD, and importation restrictions on game farm animals (see ARM 32.4.1301-1320).

- c. **Description and analysis of reasonable alternatives (including the No Action Alternative) to the Proposed Action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:**

No Action Alternative: The No Action Alternative would avoid many of the potential impacts listed above. This site would likely be used to for hay production.

- d. **Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:**

This section provides an analysis of impacts to private property by proposed restrictions or stipulations in this EA as required under 75-1-201, MCA, and the Private Property Assessment Act, Chapter 462, Laws of Montana (1995). The analysis provided in this EA is conducted in accordance with implementation guidance issued by the Montana Legislative Services Division (EQC, 1996). A completed checklist designed to assist state agencies in identifying and evaluating proposed agency actions, such as imposed stipulations, that may result in the taking or damaging of private property, is included in Appendix A. Mitigation measures described in this section address both minor and significant impacts. FWP would require stipulations to mitigate all potentially significant impacts from the Proposed Action. Most potential minor impacts from the Proposed Action are addressed as mitigation measures that are strongly recommended, but not required.



REQUIRED STIPULATION #1

- (1) *Shooting in the War Bonnet expansion pasture using high-powered rifles must be directed to the south or southwest in order to avoid residences located within 1 mile of the expansion. A guide or representative of the game farm familiar with the surrounding terrain must accompany each harvester in the expansion pasture to ensure that shooting does not occur toward residences or vehicles on nearby roads.*

Restriction on Private Property Use

This stipulation does not provide for any additional restrictions on private property use.

Alternatives

Do not restrict the direction of shooting and allow unsupervised shooting.

This alternative would not adequately address the increased risk to public health and safety due to the proximity of residences to the game farm.

Benefits from Imposing the Stipulation

This stipulation is imposed to mitigate potentially significant impacts to public health and safety from shooting operations at the proposed game farm.

Types of Expenditures the Stipulation Would Require

The stipulation would not require any additional expenditures at the game farm, assuming the guide that would accompany each shooter would be the game farm operator that would already be present at the site.

Stipulation's Effect on Property Values None.



PART III. NARRATIVE EVALUATION AND COMMENT

Wildlife use of the area and potential for through-the-fence contact with game farm animals (consider year-around use, traditional seasonal habitat use, and location of travel routes and migration corridors).

Through the fence contact: The proposed game farm is located in low density mule deer and white-tailed deer habitat. There is also the possibility that an occasional wild elk may pass through this area. Wild elk would be expected to be attracted to the game farm by the domestic elk. Transmission of disease or parasites may occur during nose-to-nose contact, nose-to-body contact, and by contacting vegetation and feces along the fence line. Disease transmission may occur from wild ungulates to game farm animals and from game farm animals to wild ungulates. Diseases such as tuberculosis are highly contagious and can be easily transmitted between domestic and wild big game species. Tuberculosis can also be transmitted to humans and is a serious health risk.

Chronic Wasting Disease (CWD) has been documented in game farm elk in at least three states. Montana now has one suspect herd, but there is no evidence that CWD is present in Montana wildlife. Both DoL and FWP have implemented extensive surveillance programs to determine if CWD is present in Montana game farm animals or wildlife. There is no diagnostic test for CWD in live animals and confirmation of the disease can only be made upon post mortem necropsy. However, CWD disease is believed to be confined to cervids and has not been documented in bovids.

Risk of disease transmission can be reduced by maintaining the integrity of the enclosure fence, by maintaining a healthy domestic elk population, and by following the above listed mitigation recommendations. If the game farm is managed properly, the risk of disease transmission from domestic game farm animals to wild ungulates would likely be minimal.

Potential for escape of game farm animals or ingress of wildlife (consider site-specific factors that could reduce the effectiveness of perimeter fences built to standards outlined in Rule 12.6.1533, including steepness of terrain, winter snow depths/drifts, susceptibility of fences to flood damage, etc.).

Fence integrity: Fence construction would be completed in accordance with requirements of FWP under ARM 12.6.1531. The game farm is located on level hayland, and it would not encounter steep hills or hazard trees. Overall, the site potential for fencing this pasture is excellent.

The enclosure site is located at an elevation of about 3,900 feet in a broad open area. The expected snow levels during winter would vary greatly in relation to the amount of snowfall, and wind velocity and direction associated with storms passing through this area. This area has the potential to receive considerable snowfall in single storm events and cumulatively during the winter. One to 2 feet of compacted snow on the ground can be expected in at least some winters. Snow depth in drifted areas may be even greater. Effective fence height would be considerably reduced under these conditions of drifted snow.

Proportion (%) of the total habitat area currently used by wildlife that would be enclosed or otherwise impacted.

The fencing of 40 acres to exclude wild ungulates is not a significant loss of habitat. Overall, the proposed game farm represents less than 1% of the available deer habitat in this area. There is an existing 37-acre game farm at the Hager ranch headquarters on the east side of the proposed game farm expansion, but even combined, these two game farms represent only a minor portion of the available habitat.

PART IV. EA CONCLUSION

1. Based on the significance criteria evaluated in this EA, is an EIS required? YES / NO

No. The appropriate level of analysis for the Proposed Action is a mitigated EA because:

- all impacts of the Proposed Action have been accurately identified in the EA; and
- all identified significant impacts would be mitigated to minor or none.

2. Describe the level of public involvement for this project if any and, given the complexity and the seriousness of the environmental issues associated with the Proposed Action, is the level of public involvement appropriate under the circumstances?

Upon completion of the Draft EA, a notice is sent to adjoining landowners, local newspapers, and other potentially affected interests, explaining the project and asking for input during a 21-day comment period which extends from July 23, 1999 until 5 pm on August 13, 1999. The Draft EA is also available to the public from the FWP office in Great Falls at the address and phone listed below and in the *Introduction* section of this EA, and through the State Bulletin Board System during the public comment period.

3. Duration of comment period if any: 21 days

4. Name, title, address and phone number of the person(s) responsible for preparing the EA:

Dept. of Fish, Wildlife and Parks

Tom Flowers, FWP Region 4 Game Warden
P.O. Box 598
Choteau, Montana 59422
(406) 466-5621

Quentin Kujala, FWP Region 4 Wildlife Biologist
P.O. Box 291
Fairfield, Montana 59436
(406) 467-2488

Maxim Technologies, Inc.

Daphne Digirindakis, Project Manager
Chris Cronin, Environmental Scientist
Doug Rogness, Senior Scientist
Valerie Jaffe, GIS and Graphics

FaunaWest Wildlife Consultants

Craig Knowles, Wildlife Biologist

APPENDIX A

PRIVATE PROPERTY ASSESSMENT ACT CHECKLIST

The 54th Legislature enacted the Private Property Assessment Act, Chapter 462, Laws of Montana (1995). The intent of the legislation is to establish an orderly and consistent process by which state agencies evaluate their proposed actions under the "Takings Clauses" of the United States and Montana Constitutions. The Takings Clause of the Fifth Amendment of the United States Constitution provides: "nor shall private property be taken for public use, without just compensation." Similarly, Article II, Section 29 of the Montana Constitution provides: "Private property shall not be taken or damaged for public use without just compensation..."

The Private Property Assessment Act applies to proposed agency actions pertaining to land or water management or to some other environmental matter that, if adopted and enforced without compensation, would constitute a deprivation of private property in violation of the United States or Montana Constitutions.

The Montana State Attorney General's Office has developed guidelines for use by state agency to assess the impact of a proposed agency action on private property. The assessment process includes a careful review of all issues identified in the Attorney General's guidance document (Montana Department of Justice 1997). If the use of the guidelines and checklist indicates that a proposed agency action has taking or damaging implications, the agency must prepare an impact assessment in accordance with Section 5 of the Private Property Assessment Act. For the purposes of this EA, the questions on the following checklist refer to the following required stipulation(s):

- (1) Shooting in the War Bonnet expansion pasture using high-powered rifles must be directed to the south or southwest in order to avoid residences located within 1 mile of the expansion. A guide or representative of the game farm familiar with the surrounding terrain must accompany each harvester in the expansion pasture to ensure that shooting does not occur toward residences or vehicles on nearby roads.*

PRIVATE PROPERTY ASSESSMENT ACT CHECKLIST

DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PRIVATE PROPERTY ASSESSMENT ACT?

YES

NO

- | | | |
|---------------|---------------|---|
| <u> </u> | <u> X </u> | 1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights? |
| <u> </u> | <u> X </u> | 2. Does the action result in either a permanent or indefinite physical occupation of private property? |
| <u> </u> | <u> X </u> | 3. Does the action deprive the owner of all economically viable uses of the property? |
| <u> </u> | <u> X </u> | 4. Does the action deny a fundamental attribute of ownership? |
| <u> </u> | <u> X </u> | 5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If the answer is NO , skip questions 5a and 5b and continue with question 6.] |
| <u> </u> | <u> </u> | 5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests? |
| <u> </u> | <u> </u> | 5b. Is the government requirement roughly proportional to the impact of the proposed use of the property? |
| <u> </u> | <u> X </u> | 6. Does the action have a severe impact on the value of the property? |
| <u> </u> | <u> X </u> | 7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? [If the answer is NO , do not answer questions 7a-7c.] |
| <u> </u> | <u> </u> | 7a. Is the impact of government action direct, peculiar, and significant? |
| <u> </u> | <u> </u> | 7b. Has government action resulted in the property becoming practically inaccessible, waterlogged, or flooded? |
| <u> </u> | <u> </u> | 7c. Has government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question? |

Taking or damaging implications exist if **YES** is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if **NO** is checked in response to questions 5a or 5b.

If taking or damaging implications exist, the agency must comply with § 5 of the Private Property Assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.

